

**PATENT** 

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of Amy L. ALLAN et al.

Serial No.:

10/723,144

Examiner:

Not yet assigned

Confirmation No.: 9257

Art Unit:

1641

Filed:

November 25, 2003

For:

PEPTIDES WHICH INHIBIT ANGIOGENESIS, CELL MIGRATION, CELL INVASION AND CELL PROLIFERATION, COMPOSITIONS AND

**USES THEREOF** 

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

## INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Enclosed is an Information Disclosure Statement and accompanying Form PTO/SB/08A for the above-identified patent application. In accordance with 37 C.F.R. §1.97(b), no additional fee for submission of the IDS is required. A return receipt postcard is also enclosed.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 03-3117.

Dated: March 30, 2004

Cooley Godward LLP ATTN: Patent Group

Five Palo Alto Square 3000 El Camino Real

Palo Alto, CA 94306-2155

Tel: (650) 843-5000 Fax: (650) 857-0663

672763 v1/PA

Respectfully submitted,

COOLEY GODWARD LLP

By:

Sunil K. Singh

Reg. No. 45,298

Attorney Docket No. ATTE-002/02US

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## INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97(b)

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56, Applicant(s) hereby submits the following information in conformance with 37 C.F.R. §§1.97 and 1.98. Pursuant to 37 C.F.R. §1.98, a copy of each document cited in the attached Form PTO/SB/08 is enclosed. This Information Disclosure Statement is filed before the mailing date of a first office action on the merits.

It is respectfully requested that the Examiner consider the above-noted information and return an initialed copy of the attached Form PTO/SB/08A to the undersigned.

Dated: March 30, 2004

Respectfully submitted, COOLEY GODWARD LLP

Cooley Godward LLP ATTN: Patent Group Five Palo Alto Square

3000 El Camino Real

Palo Alto, CA 94306-2155

Tel: (650) 843-5000 Fax: (650) 857-0663

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By:

Reg. No. 45,298

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				Group Art Unit	1641				
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Sheet	1	of	(	Attorney Docket Number	ATTF-002/02US				

U.S. PATENT DOCUMENTS							
		U.S. Patent Document			Date of Publication of Cited		
Examiner Initials*	Cite No.1	Number	Kind Code <sup>2</sup> (if known)	Name of Patentee or Applicant of Cited Document	Document MM-DD-YYYY		
<del></del>	P1	6,472,369		Livant	10-29-2002		
	P2	6,001,965		Livant	12-14-1999		
	P3	5,994,309		Mazar et al,	07-25-1997		
	P4	5,970,974		Van der Linden et al.	10-26-1999		
	P5	5,954.047		Amer et al,	09-21-1999		
	P6	5,950,619		van der Linden et al.	09-10-1997		
	P7	5,698,155		Grosswald et al.	12-16-1997		
	P8	5,639,725		O'Reilly et al.	06-17-1997		
,	P9	5,627,286		Ramalingam et al.	05-06-1997		
	P10	5,618,513		Srinivasan	04-08-1997		
	P11	5,567,408		Zamora	10-22-1996		
· ·	P12	5,561,220		Dean	10-01-1996		
	P13	5,556,611		Biesalski	09-17-1996		
	P14	5,443,816		Zamura et al.	08-22-1995		
	P15	5,112,598		Biesalski	05-12-1992		
	P16	4,765,539		Noakes et al.	08-23-1988		
	P17	4,683,202		Mullis	07-28-1987		
	P18	3,916,899		Theeuwes et al.	11-04-1975		
	P19	3,845,770		Theeuwes et al.	11-05-1974		

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>1</sup>	TOTAL POLICIO PARCILI DOCUMENT		ument	Name of Datasets and April 1994 of Clark	Date of Publication	
initials		Office <sup>3</sup>	Number⁴	Kind Code <sup>5</sup> (if known)	Name of Patentee or Applicant of Cited Document	of Cited Document MM-DD-YYYY	Té
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Examiner	•	Date	1		
Signature		Considered			

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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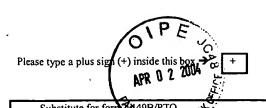
<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents.

<sup>&</sup>lt;sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

<sup>&</sup>lt;sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.



Substitute for form 149B/PTO
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet i of 5

Complete if Known						
Application Number	10/723,144					
Filing Date	November 25, 2003					
First Named Inventor	Amy L. ALLAN					
Group Art Unit	1614					
Examiner Name	Not yet assigned					
Attorney Docket Number	ATTE-002/02US					

		OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS	,
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	D1	ADELMAN et al., "In Vitro Deletional Mutagenesis for Bacterial Production of the 20,000-Dalton Form of Human Pituitary Growth Hormone," DNA (1983), 2:183-193.	
	D2	ALDERMAN, "A Review of Cellulose Ethers in Hydrophilic Matrices for Oral Controlled-Release Dosage Forms," Int. J. Pharm. Tech. & Prod. Mfr. (1984), 5(3) 1-9.	
	D3	ALMQUIST et al., "Synthesis and Biological Activity of a Ketomethylene Analogue of a Tripeptide Inhibitor of Angiotensin Converting Enzyme," J. Med. Chem. (1980), 23:1392	
	D4	BALDARI et al., "A Novel Leader Peptide Which Allows Efficient Secretion of a Fragment of Human Interleukin 1β in Saccharomyces cerevisiae," EMBO J. (1987), 6:229-234	
	D5	BAMBA et al., "Release Mechanisms in Gelforming Sustained Release Preparations," Int. J. Pharm. (1979), 2:307-315	
	D6	BEAUCAGE et al., "Deoxynucleoside Phosphoramidites—A New Class of Key Intermediates for Deoxypolynucleotide Synthesis," Tetrahedron Lett. (1981), 22:1859	
	D7	BENJAMIN et al., "Selective Ablation of Immature Blood Vessels in Established Human Tumors Follows Vascular Endothelial Growth Factor Withdrawal," J. Clin. Invest. (1999), 103:159-165	
<u> </u>	D8	BLOOD et al., "Tumor Interactions with the Vasculature: Angiogenesis and Tumor Metastasis," Biochim. Biophys. Acta (1990), 1032:89-118	
· · · · <del>-</del>	D9	BORGSTROM et al., "Neutralizing Anti-Vascular Endothelial Growth Factor Antibody Completely Inhibits Angiogenesis and Growth of Human Prostate Carcinoma Micro Tumors In Vivo," Prostate (1998), 35:1-10	
-	D10	BROOKS et al., "Disruption of Angiogenesis by PEX, A Noncatalytic Metalloproteinase Fragment with Integrin Binding Activity," Cell (1998), 92:391-400	
	D11	BRUCHEZ et al., "Semiconductor Nanocrystals as Fluorescent Biological Labels," Science (1998), 281:2013-2016	
-	D12	CHAMBERS et al., "Macrophage Colony-stimulating Factor Mediates Invasion of Ovarian Cancer Cells through Urokinase," Canc. Res. (1995), 55:1578-1585	
	D13	CHAN et al, "Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection," Science (1998), 281:2016-2018	
	D14	CHOREV et al., "Partially Modified Retro-Inverso-Enkephalinamides: Topochemical Long-Acting Analogs in vitro and in vivo," Science (1979), 204:1210-1212	
	D15	CROWLEY et al., "Prevention of Metastasis by Inhibition of the Urokinase Receptor," Proc. Natl. Acad. Sci USA (1993), 90:5021-5025	_
	D16	DURING et al., "Controlled Release of dopamine from a Polymeric Brain Implant: In Vivo Characterization," Ann. Neurol. (1989) 25:351	
<del></del>	D17	EDGE, "Total Synthesis of a Human Leukocyte Interferon Gene," Nature (1981), 292:756-762	

xaminer	Cite	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book,	T <sup>2</sup>
itials*	No.1	magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country  where published.	1-
	D18	FOLKMAN, "Anti-Angiogenesis: New Concept for Therapy of Solid Tumors," Ann. Surg. (1972), 175:409-416	
<u>-</u>	D19	FOLKMAN, "The Influence of Angiogenesis Research on Management of Patients with Breast Cancer," Breast Cancer Res. Treat. (1995), 36(2):109-118	
	D20	FOLKMAN, "Angiogenesis Inhibitors Generated by Tumors," Mol. Med. (1995), 1(2):120-122;	
	D21	GIANNIS et al., "Peptidomimetics in Drug Design," Adv. In Drug Res. (1997), 29:1-78	
	D22	GLUZMAN, "SV40-Transformed Simian Cells Support the Replication of Early SV40 Mutants," Cell (1981), 23:175-182	
	D23	GOODSON, "Medical Application of Controlled Release" 2:115-138 (1984)	
	D24	GORELIK et al., "Control of Lung Metastasis Progression in Mice: Role of Growth Kinetics of 3LL Lewis Lung Carcinoma and Host Immune Reactivity," J. Nat'l Canc. Inst., (1980), 65:1257-1264	
	D25	GORELIK et al., "Host's Immune State and Kinetics of Local Tumor Growth Control – Progression of Postoperative Lung Metastasis," Rec. Results Canc. Res. (1980), 75:20-28	
	D26	HANAHAN et al., "Patterns and Emerging Mechanisms of the Angiogenic Switch during Tumorigenesis," Cell (1996), 86(3):353-364	_
	D27	HILGARD et al., "Oral Anticoagulation in the Treatment of a Spontaneously Metastasising Murine Tumour (3LL)," Br. J. Cancer (1977), 35:78-86	
	D28	HOLLADAY et al., "Synthesis of Hydroxyethlene and Ketomethylene Dipeptide Isosteres," Tetrahedron Lett. (1983), 24:4401-4404	
	D29	HOWARD et al., "Intracerebral drug delivery in rats with lesion-induced memory deficits," J. Neurosurg. (1989), 71:105-112	
	D30	HRUBY, "Conformational Restrictions of Biologically Active Peptides Via Amino Acid Side Chain Groups," Life Sci. (1982), 4:189-199	
	D31	HRUBY, "Conformational and Topographical Considerations in the Design of Biologically Active Peptides," Biopolymers (1993), 33:1073-1082	
	D32	ISAKOV et al., "An Immune Response against the Alloantigens of the 3LL Lewis Lung Carcinoma Prevents the Growth of Lung Metastases, but Not of Local Allografts," Invasion Matas. (1982) 2:12-32	
	D33	JAY, "Chemical Synthesis of a Biologically Active Gene for Human Immune Interferon-γ," J. Biol. Chem (1984), 259:6311-6317	
	D34	JENNING-WHITE et al., "Synthesis of Ketomethylene Analogs of Dipeptides," Tetrahedron Lett. (1982), 23:2533-2534	
	D35	KAUFMAN et al., "Translational Efficiency of Polycistronic mRNAs and their Utilization to Express Heterologous Genes in Mammalian cells," EMBO J., (1987), 6:187-195	
	D36	KLEINMAN et al., "Basement Membrane Complexes with Biological Activity," Biochemistry (1986), 25:312-318	
	D37	KURJAN et al., "Structure of a Yeast Pheromone Gene (MFα): A Putative α-Factor Precursor Contains Four Tandem Copies of Mature α-Factor," Cell, (1982), 30:933-943	
	D38	LANGER et al., "Chemical and Physical Structure of Polymers as Carriers for Controlled Release of Bioactive Agents: A Review," J. Macromol. Sci. Rev. Macromol Chem., (1983), 23:61	

	T 6. 1	COLUMN CONTRACT DESCRIPTION OF COLUMN	1 ~?
xaminer nitials*	Cite No.'	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	D39	LANGER, "New Methods of Drug Delivery," Science, (1990), 249:1527-1533	
	D40	LEVY et al., "Inhibition of Calcification of Bioprosthetic Heart Valves by Local Controlled-Release Diphosphonate," Science, (1985) 228:190	
	D41	LUCKLOW et al., "High Level Expression of Nonfused Foreign Genes with Autographa californica Nuclear Polyhedrosis Virus Expression Vectors," Virology (1989), 170:31-39	
	D42	MALAVE et al., "Influence of Inoculation Site on Development of the Lewis Lung Carcinoma and Suppressor Cell Activity in Syngeneic Mice," J. Nat'l. Canc. Inst. (1979), 62:83-88	
	D43	MATTEUCCI et al., "Synthesis of Deoxyoligonucleotides on a Polymer Support," J. Am. Chem Soc. (1981), 103:3185	
	D44	MAXAM et al., "Nucleic Acids," Meth. Enzymol. (1980), 65:499-560	
	D45	MERRIFIELD, "Solid Phase Peptide Synthesis. I. "The Synthesis of a Tetrapeptide," J. Amer. Chem. Soc. (1963), 85:2149-54	
	D46	MESSING et al., "A System for Shotgun DNA Sequencing," Nucleic Acids Res. (1981), 9:309	
	D47	MILLAUER et al., "Dominant-Negative Inhibition of Flk-1 Suppresses the Growth of Many Tumor Types in Vivo," Cancer Res. (1996), 56:1615-1620	
-	D48	MIN et al., "Urokinase Receptor Antagonists Inhibit Angiogenesis and Primary Tumor Growth in Syngeneic Mice," Cancer Res. (1996), 56:2428-2433	
• • • • • • • • • • • • • • • • • • • •	D49	MOORE et al., "Design and Pharmacology of Peptide Mimetics," Adv. In Pharmacol. (1995), 33:91-141	<u> </u>
-	D50	NAMBAIR et al., "Total Synthesis and Cloning of a Gene Coding for the Ribonuclease S Protein," Science (1984), 223:1299-1301	
	D51	NGUYEN et al., "Quantitation of Angiogenesis and Antiangiogenesis in the Chick Embryo Chorioallantoic Membrane," Microvascular Res. (1994), 47:31-40	
	D52	ODEDRA et al., "Low Molecular Weight Angiogenesis Factors," Pharmac. Ther. (1991), 49:111-124	
	D53	OLSON et al., "Concepts and Progress in the Development of Peptide Mimetics," J. Med. Chem. (1993), 36:3039	-
	D54	O'REILLY et al., "Endostatin: An Endogenous Inhibitor of Angiogenesis and Tumor Growth," Cell (1997), 88:277-285	
	D55	O'REILLY et al., "Angiostatin: A Novel Angiogenesis Inhibitor That Mediates the Suppression of Metastases by a Lewis Lung Carcinoma," Cell (1994), 79:315-328	
	D56	PARISH et al., (1992), "A Basement-Membrane Permeability Assay Which Correlates With The Metastatic Potential of Tumour Cells," Int. J. Cancer 52:378-383	
-	D57	PASSANITI et al., "A Simple, Quantitative Method for Assessing Angiogenesis and Antiangiogenic Agents Using Reconstructed Basement Membrane, Heparin, and Fibroblast Growth Factor," Lab Invest. (1992), 67:519-528	
	D58	RABBANI et al., "Prevention of Prostate-Cancer Metastasis In Vivo by a Novel Synthetic Inhibitor of Urokinase-Type Plasminogen Activator (uPA)" Int. J. Cancer (1995), 63:840-845	
	D59	SANGER, "DNA sequencing with chain-terminating inhibitors," Proc. Natl. Acad. Sci. USA (1977), 74:5463-5467	

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		OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
-	D60	SAUDEK et al., "A Preliminary Trial of the Programmable Implantable Medication System for Insulin Delivery," N. Engl. J. Med. (1989), 321:574	
	D61	SCHNAPER et al., "Plasminogen Activators Augment Endothelial Cell Organization In Vitro by Two Distinct Pathways," J. Cell. Physiol. (1995), 165:107-118	
	D62	SCHOCKLEY et al., "Penetration of Tumor Tissue by Antibodies and Other Immunoproteins," Ann. N.Y. Acad. Sci. (1991), 617:367-382	
	D63	SCHULTZ et al., "Expression and secretion in yeast of a 400-kDa envelope glycoprotein derived from Epstein—Barr virus," Gene, (1987),54:113-123	
	D64	SEFTON, "Implantable Pumps," CRC Crit. Ref. Biomed. Eng. (1987), 14:201	
1.00	D65	SMITH et al., "Production of Human Beta Interferon in Insect Cells Infected with a Baculovirus Expression Vector," Mol. Cell Biol. (1983), 3:2156-2165	
	D66	SPATOLA, "Chemistry and Biochemistry of Amino Acids, Peptides and Proteins," B. Weinstein, (eds.), Marcel Dekker, New York, (1983) 267-357	
	D67	SPATOLA et al., "Structure-Activity Relationships of Enkephalins Containing Serially Replaced Thiomethylene Amide Bond Surrogates," Life Sci. (1986), 38:1243-1249	
	D68	TALMADGE et al., "Enhanced Metastatic Potential of Tumor Cells Harvested From Spontaneous Metastases of Heterogeneous Murine Tumors," J. Nat'l. Canc. Inst. (1982), 69:975-980	
	D69	THAKUR et al., "Indium-111-labeled leukocytes for the localization of abscesses: preparation, analysis, tissue distribution, and comparison with gallium-67 citrate in dogs," J. Lab. Clin. Med. (1977), 89:217-228	
	D70	TREAT et al., "Liposomes in the Therapy of Infectious Diseases and Cancer", Lopez-Berestein and Fidler (eds.), Liss, New York, pp. 353-365 (1989)	
	D71	VERMA et al., "Osmotically Controlled Oral Drug Delivery," Drug Dev. Ind. Pharm. (2000), 26:695-708	
	D72	VERSCHOYLE et al., "Pharmacokinetics of Isotretinoin (ISO) in Rats following Oral Dosing or Aerosol Inhalation," British J. Cancer (1999), 80 Suppl. 2, 96	
	D73	VOLPERT et al., "Captopril Inhibits Angiogenesis and Slows the Growth of Experimental Tumors in Rats," J. Clin. Invest. (1996), 98:671-679	
	D74	WILEY et al., "Peptidomimetics Derived from Natural Products," Med Res. Rev. (1993), 13:327-384	
	D75	XING et al., "Overexpression of Urokinase Receptor in Breast Cancel Cells Results In Increased Tumor Invasion, Growth and Metastasis," Int. J. Cancer (1996), 67:423-429	
	D76	ZOLLER et al., "Oligonucleotide-directed mutagenesis using M13-derived vectors: an efficient and general procedure for the production of point mutations in any fragment of DNA," Nucleic Acids Res. (1982), 10:6487-6500	

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 672602 v1/PA

Unique citation designation number.
 Applicant is to place a check mark here if English language Translation attached.